The Illustrated Long-Term Survival Guide:

(What tools to get, which supplies to store away, how to catch your own food, and how to make your own stuff.)

My interest is focused on long-term survival, instead of finding your way out of the woods, so my ideas are slanted in that direction. From a survival viewpoint, disasters get in the way of our ability to obtain the goods (such as food and water) and services (such as police protection and medical care) we normally depend on every day, and which we are used to obtaining from other people, by paying for them with the money earned from our jobs. But if the supplies are disrupted, or the stores and hospitals are closed, or police are unavailable, or if inflation makes things unaffordable, you will still need and want these goods and services (the basic necessities of life). The question is how to get them. Most folks nowadays are specialists, used to making a living with one main skill. Modern people seldom think about how to make their own stuff, but it can be done, to one degree or another. You can provide yourself with life's basic needs, if you acquire the tools and knowledge you need now, while they are still available. You can do much better than the basics if you are willing to do a little advance planning and preparation.

Basically, you want four types of items: tools for producing wealth (such as a hammer), consumable items for use with the tools (such as nails for the hammer), information on using your tools (such as a book on home repairs), and a stockpile of items which are cheaper to buy and store than to make yourself (such as fishhooks), or which are too hard to make yourself (such as needles), or which fall into both these categories (such as .22 ammunition). So first, here is a selection of useful tools and supplies for survival tasks. Some are suitable for inclusion in a survival kit, pack, bug-out bag, or escape and evasion kit, and some are better suited for vehicle kits, caches, and stockpiling.

Your individual circumstances will determine what will be most important to you, but in general you might list the jobs you want to do for yourself by priority; self-defense and first aid, then protection from exposure (fire, shelter and clothing), then water, then food, then everything else. This is the order in which these problems will kill you, leaving out less likely things, like drowning and house fires.

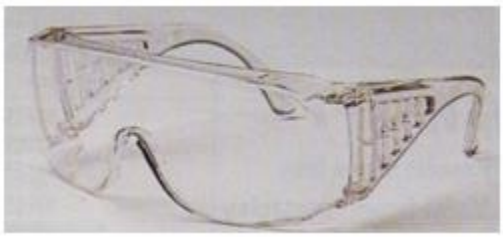
One of the best survival tools you can own is the right kind of knife. You can do more survival tasks with a large knife (of good design) than any other tool. I favor the cold steel kukri machete pictured here, which is about $15. I own many, many knives, but this one works best for me. It seems to have the right balance of design, size, weight, and edge-holding ability, but many similar knives will also do the job.

Although your large knife will not do the tasks you need an axe, shovel, or hammer for, you can use it to build shelters, manufacture an endless number of useful items, process game, and do a thousand other jobs that a small knife (or even large machete) are inadequate for. A knife that is too light will not chop properly, and one that is too heavy will fatigue you too quickly. I like to modify my equipment when I can think of an improvement, so on mine I added a small pouch for a magnesium fire starter on the front of the sheath, and another on the back, for a small file.

You will also want a small knife, for the jobs a big one is not suited for, such as filleting small fish, skinning small animals, and small carving and whittling jobs. Many small knives are suitable for this role, but I prefer full-tang fixed blades over folders, for durability. I also like the small knives made from one piece of steel with a cord-wrapped handle, for using as spear-heads.

Having the tool is good, but you also need to know the best way to use your tools, and what to make with them. Fortunately, there is no need to think of everything yourself. For ideas on what to build with your knives, see "Shelters, Shacks and Shanties" by D.C. Beard, or "Bushcraft", by Richard Graves. I will try to consolidate all of the most important information from various sources into this guide, but having your own reference library is always a good idea. (See chapter 20 for a list of 460 useful free books, that you can download from archive.org).

For larger chopping jobs, such as cutting large amounts of firewood, or shaping logs into useful items, you need an axe. Even if you prefer a chainsaw, you need to own axes, because they don't need fuel, cut quietly, only weigh a few pounds, and are low-maintenance. They are also nice and cheap; you can find wooden handled axes for as little as $10, and fiberglass handled axes for $20. For people of small stature, there are axes smaller than a normal full-size; sometimes called boy's axes. They are more efficient than hatchets, for people who have a hard time handling a larger axe. I consider the axe such a useful tool, that I like to keep axe heads and wedges (for securing the handles) stashed in my supplies and caches, for emergency backups. I will add a straight handle made from a tree branch, if I ever need one. (Curved handles are a rather recent innovation.) You can often find axe heads with broken handles at garage sales and flea marts for a dollar or two. An axe or hatchet head can also be mounted on a forked tree branch to form an improvised adze, a useful tool which is hard to find nowadays.



(Safety glasses and gloves are a must, for chopping jobs.)

To sharpen your knife and axe, you need files. This is a good tool to stock up on, because they are hard to make yourself. I like to make a little sheath out of nylon strapping for each file, and paint them with an anti-rust spray paint. I also like a good diamond sharpener. The smith's combo sharpener shown here is about $15, has a coarse and a fine side, and stores in the handle. DMT also makes a neat little diamond sharpener which is the size and shape of a credit card.

You will find one of the many styles of multi-tool to be helpful, for jobs such as cutting wire for snares, and many other small tasks.

Don't laugh, but I consider the lowly hacksaw to be an important survival tool. It can cut materials (such as pipe) into useful items. They are also good for cutting dovetail notches into limbs and poles. If you have one of these saws, you could make useful tools from parts of wrecked or abandoned vehicles, or other metal objects. Metal and wood-cutting blades are available, and carbide grit blades (which cut hardened steels such as padlocks, or even glass). Hacksaws are cheap, and light enough to keep in a pack, unlike a cutting torch and tanks, or a forge and anvil. I like to stock up on lots of spare blades; they are hard to make yourself.

A small hand drill is also very useful for making holes, and there are lots of cheap bit sets available. Drilling holes makes it much easier to lash objects together, and combine parts to make tools or furnishings.

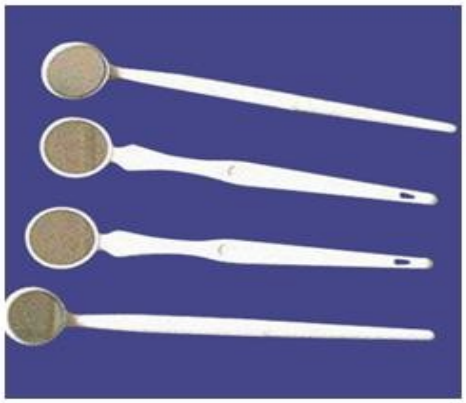
For making holes in logs, you may want an old-style brace and auger bit set to add to your tools. I also like this little camp saw, which comes with its own sheath, and is about $8 at Walmart. It is handy for cutting limbs and poles. A hole saw set is also very handy for making larger holes, and especially useful when joining bamboo poles together.

There are many fire-starting tools available; why not own some of each? Pictured are butane lighters, zippo-style lighter and fuel, magnesium firestarter, blast match, wooden matches, and a plastic fresnel lens (which is also available in wallet size).

For water carrying and storage, surplus canteens are still good for on-the-go use, and the metal canteen cups and stove rings are very handy. The seven gallon jug pictured here is my pick for vehicles, home storage, and caches, and there is one style for sale that has a removable filter, which conveniently stores in a niche in the side of the jug, until you need it to filter suspect water. There are also many styles of hydration bladders and packs to choose from, and many styles of small water filters. I also prefer iodine crystals and dry chlorine powder for water purification agents, instead of purification tablets or bleach (both tablets and bleach have short shelf lives).

The three basic food-gathering tools for survival use are wire snares, cable-lock snares (deer snares), and fishhooks. Even if you like to go out and hunt or fish for your food, setting snares and traps allows you to do other things while the trap hunts for you. You may be pressed for time, and with these you need only check your snares or trot lines once or twice a day. Pictured here is green floral paddle wire, a cable-lock deer snare, and a fish hook assortment. These are consumable supplies, of course, but there are many traps (such as the den trap) you can make using only natural materials, or scrounged items and trash. Cable-lock snares are easy to make yourself, and you can make them with salvaged materials in a pinch (such as barbed wire, by unwinding the two strands and removing the barbs). The lock can be made from angle iron, or flat metal (by bending it 90 degrees like angle iron). Den traps are even better, since they never have to be checked until needed.

If you have any military experience, you already know the value of digging tools for making foxholes and fighting positions. I prefer the styles of surplus entrenching tools shown here (collapsible shovels tend to, well, collapse). The small surplus pick shown here is very useful for hard or rocky soil. Full sized picks and shovels (and rakes and hoes) are great items to stock up on, but these short versions are good for packs and vehicle kits, and come in handy when making den traps, dakota fire holes, and field fortifications.



First aid kits are good to have, but field surgical supplies (like the kit shown here) can save your life if you are injured and help is not available. Accidental wounds from knives, axes, or guns become more likely in stressful situations, and there is always the possibility of being attacked. I also like the stainless steel camping mirror and dental mirrors shown here, for viewing hard to see areas when alone.

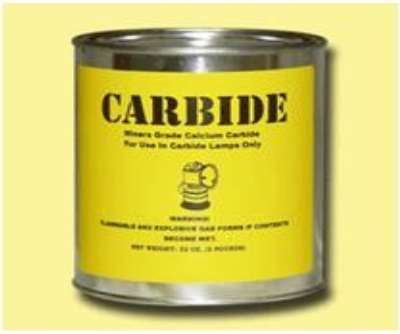
Small bivy tents like this one are a cheap and compact way to have a shelter stashed away. You may want a larger tent to accommodate friends and family, but each person should also have their own individual equipment.

Some sleeping bags compress to the size of a loaf of bread nowadays; the mylar bag is pocket sized (but single-use).

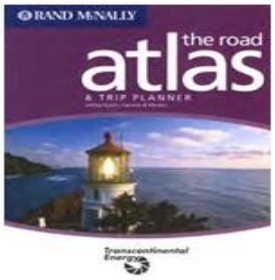
I prefer to haul my gear in a backpack, and there are lots of commercial and surplus styles. Pictured here are the US Alice pack, Swiss nylon, and Swiss rubber-coated packs. I like the rubberized packs because I live where it rains a lot, but rain covers for packs also work.

Waterproof surplus bags are good for keeping clothing dry. The G I mess kit and utensils are tough, and compact, and I always have a large supply of the old military style can openers (called P-38s) which used to come in C-rations. Now stores sell oversized versions.

LED flashlights use light-emitting diodes instead of fragile bulbs, and are much more efficient. The white light is not very impressive in the daylight, but works well at night. There are now many styles to choose from, including models with clip-on clamps and headbands. Some also have red LEDs for night use (red light will not interfere with your eye's night vision abilities like white light will). Larger types of LED lights and lanterns now have 20 to 30 LEDs, and prices have been dropping, due to competing brands. Also, LEDs have several advantages over other bulbs. They are hard to break, use less electricity, and will run for over ten years continuously without burning out.



I am very fond of hurricane lamps. They are simple, cheap, and will burn kerosene, alcohol, citronella oil, diesel fuel, olive oil, vegetable and nut oils, or animal fats (lard must be heated first, to liquefy it). Carbide lamps are still available from sporting goods stores that supply cavers and climbers; they are bright, compact, and simple to use, but carbide fuel may be hard to get if you don't stock up in advance.



A map and compass are still the basic tools for navigation. GPS units are great, but require batteries and rely on orbiting satellites to work.

Optics help you find what you are looking for. I like monoculars, and the digital binoculars (which capture images).

Guns and Ammo:

The 50 BMG rifles can be very useful, but should not be your first choice in a survival gun.

Few topics stir people up as much as discussing which guns are better than others. For survival purposes, I prefer rugged military surplus rifles. They have advantages over sporting or hunting rifles which may not be obvious. For instance, they are designed to stand up to constant abuse and keep working. The actions on military guns are looser than sporting arms, so that they can be fired hundreds of times without jamming up, and they will keep their aim after heavy use. This can be a real lifesaver. Sporting guns weren't designed with this in mind. The fact that surplus rifles are also cheap is a pleasant plus. Their ugly appearance puts many people off, but I happen to find them very appealing (think of it as "poor camouflage"). Here are my humble opinions on where you should start, when building your survival gun collection:

22 ammo is one of my favorite things to stock up on and cache. It is cheap, useful, and very hard to make, or reload.

Almost everyone owns a 22, but few people own much ammo. If the supply is ever cut off, or ammo is outlawed, your ammo will become very valuable. Bullets may eventually be the next "money", when our currency collapses.

The Ruger 10/22 semi-auto rifle is very popular, and many accessories are available for this little 22 rifle.

The (discontinued) Remington Nylon 66 can still be found used. It has a 14 round tubular magazine in the stock.

Even in 22 caliber, I like military surplus rifles, like these Romanian M1969 bolt-action 22 rifles (training rifles). Bolt-action rifles are tougher than semi-autos (this is why most sniper rifles are bolt-actions), and there are many good commercial bolt-action 22s available. Also good is the single-shot Stevens Favorite rolling-block 22 rifle (closeup of action shown here).

Stevens Favorite rolling block 22 rifles were recently brought back into production, so they can be found old and used, or brand new. They are a good gun for caching; with few moving parts, very little can go wrong with them.

The Mosin Nagant 91/30 bolt-action rifle (7.62 x 54R) is a very accurate 30 caliber rifle that sells for around $100 to $150. You could buy ten of these for the price of one assault rifle, and they are accurate enough to be used as sniper rifles. Though mounting a scope on these rifles can be an awkward task, it’s well worth the effort, given this rifle's exceptional long-range accuracy potential. An easier way, which requires no gunsmithing, and avoids replacing the bolt handle with a bent one, is to buy a scope mount which replaces the rear sight, and add a pistol scope with long eye relief, giving you a poor-man’s scout rifle. You can get one for $29, from crankyfarmer.com.

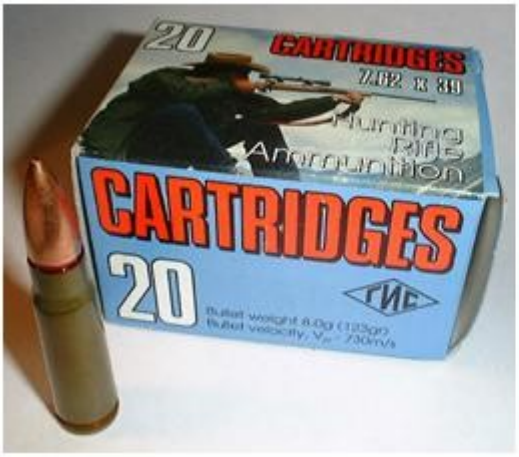
Close-up of Mosin bolt action.

The 7.62 x 54R cartridge fits both these rifles.

Mosin-Nagant with rear sight scope mount. This will not get in the way of operating the bolt.

M44 carbine version of the Mosin Nagant bolt-action rifle (7.62 x 54R). It's shorter length makes it handier than the 91/30, and they both use the same round.

I also like the SKS semi-auto rifle (7.62 x 39). It may be the cheapest and toughest semi-auto 30 caliber there is. While not the most accurate rifle in the world, it is great out to 100 yards or so. For longer ranges, get the Mosin-Nagant. Now, if you can afford to stock up on better weapons than these, there is no reason not to, but these are what I consider to be the minimum acceptable guns, and you may want to own a number of these anyway, for arming your friends and family, and possibly for trading. Also, I deliberately avoided talking about handguns and shotguns here, as I will cover them in a different chapter.



The 7.62 x 39 round is cheap and plentiful right now. You could buy a few boxes, but buying this or any other cartridge is better done by the case, for cost savings. Ask your local gun store owner, or check the Shotgun News .

Cases of surplus ammo may come in plastic battle packs, or in metal cans. Both are good for long-term storage.

The cans can be hard to open, so I always keep a small hammer and chisel stored with each can. They were supposed to be opened with a large can opener which may still come with the can, but these often won't do the job.

I like to keep a few extra boxes of ammo on hand, just in case (ha ha).

When storing or caching ammo (and many other items), surplus ammo cans are ideal. They are watertight due to a rubber gasket around the lid. I put a disposable diaper in the bottom (to absorb water, if your can ever leaks), and a bag of desiccant on top (to keep the air in the can bone dry). Ammo stored this way will keep forever. There are many sizes of ammo cans to choose from. A tall 120 mm can will hold guns with folding stocks.

I also like to store gear in plastic five and six gallon buckets with lids, and used 55 gallon barrels with screw-on lids. Check around your area, and someone probably sells used barrels. They range in color from black to orange, and come in different styles. There are also some smaller sizes available.

Cleaning kits are a must to keep your guns working. I prefer the small surplus kits, like the four shown here. There are a ton of accessories you can get for your guns, but the most important are the cleaning kits, gun oil and gun grease, a sling for each rifle, a bipod for each rifle (like this plastic clip-on type), a scope if desired, and a broken shell extractor to remove separated rounds (the ends of some cartridges may tear off, leaving the body of the cartridge stuck in the chamber of your rifle, and a broken shell extractor of the correct caliber is about the only way to remove these quickly). If gun oil and gun grease are in short supply, the best substitute is bearing grease, which has the same anti-rust compounds as gun grease, and is cheap and available anywhere auto parts are sold.

For repairs, I show a sewing awl, sewing kits, and duct tape, but you can add many other items to customize a repair kit. I like to keep a large stock of hardware items, such as nails, staples, wood screws, bolts, hinges, and the pre-packaged hardware assortments.

Night vision equipment keeps getting smaller and cheaper every year. Buy the units which use common batteries, or which don't need batteries, like the lever-operated model shown here. Digital night vision units like the aurora, are new and still fairly expensive.

There are lots of consumer items which would be good to store up, even if only in small quantities. Future shortages, inflated prices, and possible lack of availability of medical care make owning the following items advisable.

Buy extra prescription glasses and sunglasses, and reading glasses in various strengths (even if you don't need them). Reading glasses come in small folding styles nowadays. One brand, called flapjacks, folds completely flat, and some come in tiny cases. Grinding your own lenses is a real pain, and you could help your unprepared (and nearsighted) friends. Don't forget eyeglass repair kits, eye drops, and eye salve.

People have committed suicide when they couldn't get relief from tooth pain. Toothache drops and dental emergency kits are a must.

Being sick is more bearable with a supply of Nyquil and cough drops. Don't forget your favorite aspirin, insect repellant, & sun screen.

You may be hiking a lot in a disaster; take care of your feet with foot powder, moleskin, and insoles. The skin on your hands may become cracked with hard use, so hand creams, like crack cream or udder cream, should be stored as well. Lice combs are also a good investment.

Medical supplies shown are antibiotic cream, iodine solution, alcohol & prep pads, and bleach (for disinfecting and laundry). Liquid bleach has a relatively short shelf life, so chlorine powder for swimming pools is best for long term storage. It is also used to purify drinking water.

Shown here are ace bandages, bandaids, and assorted gauze bandages and tapes, for your medical supplies.

I like the military surplus field dressings, which come in sealed pouches like the ones shown here. These go in my packs, because the pouch keeps the dressing clean and sterile even if your supplies get wet, such as while crossing a river, or traveling on foot in the rain.

You can also keep your supplies dry by packaging them in mylar bags, which can be cut to size and sealed with a Teflon-coated iron.

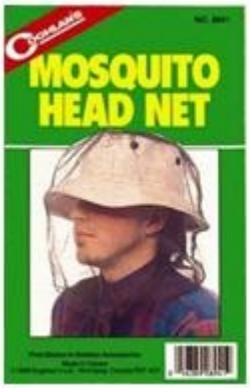
Can you do your laundry (or dishes) without electricity? Washing machines are great, but here is the minimum tool set for cleaning your clothes. A small scrub board (which fits inside a 5 gallon bucket), laundry soap, clothes line and clothes pins, and bucket. Everything also stores inside the bucket. You can add a gamma seal lid (which screws off & on) to the bucket, and tumble it on an improvised spit instead of scrubbing. Manually operated washers with wringers (called james washers), are available from Lehmans non-electric catalog, and there is a small plastic hand washer on the market as well, but my set is cheap & easy to acquire, and takes up minimum space. I store a lot of gear in Rubbermaid storage tubs with lids, and when empty, the tubs can serve many purposes, such as washtubs, fresh water storage, and they can act as water heaters when filled and placed by your wood stove (cold water gets warm enough for washing or comfortable bathing this way). This works with buckets as well, just place in the radiant heat zone, but not so close that they touch the stove or melt. When used this way by a campfire, a loose-fitting lid keeps ash out of the water and speeds the heating process. Don't do this with anything sealed, or it may burst. Of course for dishes, you will want some pot-scrubber sponges, and a supply of dish soap, though any soap will do in a pinch.

James washer, wonder washer (it only holds a few clothes per load), Rubbermaid storage tub, & scrubbing sponges.

To purify drinking water, I like Iodine crystals (like these polar pure crystals), and powdered swimming pool chlorine (which comes in little bags, or various sizes of plastic bucket). I am also fond of the drinking straws and water bottles with built-in filters, like the ones shown here.

Don’t forget items for psychological comfort. Bibles, playing cards, travel-size game sets, and perhaps a small stuffed animal or two, can soothe and distract adults or children without taking up too much space in your supplies. A small family photo album is also a good idea.

Having a source of information, a way to communicate, or even soothing music can make a big difference in a stressful situation. Pictured here are a small world-band radio, hand-held scanner, two-way radios, AM / FM CD player, and pair of surplus field phones. Don’t forget lots of extra batteries.



Insect netting is a must, if you live in a buggy area, like I do. The jungle-style hammocks have built-in screening.

There are many uses for rope, cordage, and string. Shown here are climbing rope and parachute cord. Parachute cord has inner strands which can be removed and used where smaller line is called for, such as improvised fishing lines.

These four items can be very important when processing your own food. Shown are a meat grinder, grain grinder, baby food grinder, and flour sifter. Grinding food allows you to eat even if you can't chew, say due to a toothache, or broken dentures. Babies need finely ground food, or they may not be able to digest enough of their food to obtain sufficient nutrition from it. A flour sifter separates fine flour from hull pieces, making grain easier to digest. You can improvise grinders and sifters, but commercially made versions are more efficient.

What foods should you store? I keep datrex emergency rations in my packs, and a large supply of regular canned goods at my home, along with ramien noodles, lots of bulk grains, and plenty of garden seeds. The grains I store are mostly in 5 gallon buckets with mylar bag liners, but some are in # 10 cans as well. My grain list includes wheat, corn, beans, rice, and popcorn. Wheat can be sprouted, even in a pitch dark mineshaft, for fresh veggies. Rice is the only grain which doesn't need to be ground up before eating, unless you count popped popcorn. Whole grains store basically forever, unless they get wet or infested with pests. I also store salt, sugar, honey, and bags of hard candy, which keep forever. I have lard, cooking oil, baking powder and baking soda stored away, but these supplies have to be replaced every year or so. In addition, I store lots of garden seeds, both the non-hybrid types, and regular seed packs that I buy whenever they are on sale for ten cents per pack. (These are stored in ammo cans with desiccants, to keep them bone dry; they will store for years this way.) I also keep caches of food, even though I plan to live on the abundant wildlife in my area, in case of poor trapping. Store freeze-dried coffee, even if you don't drink it, because the nearest coffee plant is a long ways off. A stockpile of wine & spirits is another good investment.

More things to stockpile. Even if you don't have children, it is good to stock some diapers and wipes. The same goes for feminine hygiene items, which will be in very high demand if shortages occur. Diapers are also good to put in the bottom of ammo cans, as leak insurance.

Birth control pills are a must for long-term planning. Pregnancy during a long-term disaster can be bad for your chances to make it through. Some simple hygiene items are also pictured here; soap, swabs, nail clippers, and hassock style of portable toilet. Having these items is a morale booster; I don't know anyone who prefers to go to the toilet behind a bush, and the hassock toilet is $20 at Walmart.

One more item to stock up on. It is bulky, but worth the effort.

Substitutes for toilet paper include other types of paper (which should be crumpled up and smoothed out several times, to soften each sheet), grass balls (these are soft grasses which are collected and dried, then rolled into balls about the size of tennis balls), and cloth rags or wash-cloths (these are placed in a bucket of water containing soap and bleach after using them, to soak before washing them, like people used to do with reuseable cloth diapers).

So if you have a good selection of all the previous items and still have money left over, I would suggest investing in some "junk" silver coins. These are pre 1965 dimes and quarters which are 90% silver, but have no collector value. You can buy them from most coin dealers. Some people buy gold coins, but I think they are too hard to make change for. Silver coins can be bought by the ounce, or in bowling-ball sized bags. Normally I only buy useful items, but a supply of these may come in handy for trading. Hard to say if they would be accepted better than a brick of 22 ammo, but they also have practical uses. Silver dimes are thin enough that they can be melted and used as silver solder, for metal-working. Larger silver coins can be hammered out thin first, and then used in the same way.

Ok, so that makes up a very basic list of things you should own. Lists of equipment and supplies have a tendency to grow into lists of every possible thing you could own. You can add hundreds more things to my little list, but this is a good starting point. Now we can move on, to how to improvise if your gear is lost, stolen, never acquired (or just used up), and what kinds of things you can make for yourself, using your tools. The following ideas are scrounged from a variety of sources. As I don't enjoy typing, I tend to find other people's articles that say roughly what I want to say, then condense, cut and paste, and reword them, until I like them better. Info is presented to help you stay alive and well, with no intent to sell, or profit from other people's work. I live in the pacific northwest, a heavily wooded area with lots of rain, abundant game, and natural resources. If you live in a city, desert, or snowy region, I would expect your priorities to be a little different from mine. Your opinions may vary, so feel free to modify these ideas to suit yourself. I consider my little file as a work in progress, so you may run across more than one version. Some information I have is almost impossible to find on the net, so I had to make up my own articles. I originally started this file purely for my own enjoyment, as there are very few books available on long-term survival, and I wanted to make one I could print, and give to my friends. I intend to keep adding to it, as I find and create more articles of interest, and I invite you to do the same.